

ABSTRACT

**TUNABLE LASER SOURCE WITH INTEGRATED OPTICAL AMPLIFIER**

A laser assembly includes an epitaxial structure formed on a substrate. A separately controllable tunable laser resonator and external optical amplifier are formed in the epitaxial structure. At least a portion of the laser and amplifier share a common waveguide, which may have non-uniform optical or geometrical properties along the waveguide centerline or across a normal to the centerline.

09614375-071200